



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/085,223	02/28/2002	David B. Kramer	8-21-9	6966
7590 02/06/2006			EXAMINER	
Ryan, Mason & Lewis, LLP 90 Forest Avenue Locust Valley, NY 11560			JONES, PRENELL P	
			ART UNIT	PAPER NUMBER
			2668	

DATE MAILED: 02/06/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

212

Office Action Summary	Application No. 10/085,223	Applicant(s) KRAMER ET AL.	
	Examiner Prenell P. Jones	Art Unit 2668	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 4/25/02.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5 and 15-20 is/are rejected.
- 7) ☐ Claim(s) 6-14 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1, 2, 4, 5 and 16-19 are rejected under 35 U.S.C. 102(e) as being anticipated by Hashem et al (US PG PUB 2002/0122403 A1).

Regarding claims 1, 16 and 19, Hashem discloses management and scheduling in a wireless computer communication system, wherein a processor includes a scheduling circuit for scheduling data blocks from a plurality of transmission elements, wherein the scheduling circuit included a least one time slot table, wherein the scheduling circuit is configured for utilizing at least one time slot table in scheduling data blocks for transmission, the time slot table includes a plurality of locations corresponding to a transmission time slot and being configurable for storing identifiers of at least two of the transmission elements (Abstract, Figs. 7-11, in a wireless computer communication system wherein the architecture includes the communication between a base station and multiple mobile users, a radio resource manager (RRM) known as a scheduler in conjunction with a time slot table is utilized to for scheduling and managing resources and transmission frames/data blocks/packets, time slot table includes multiple

locations for time slots identifier and associated identified multiple mobile devices, paragraph 0021, 0022, 0045, 0056, 0085, 0089, 0091, 0092, 0096).

Regarding claims 2, Hashem further discloses that the RRM (scheduler) has memory storage capabilities with respect to a general purpose specialized computer via executable programmatic software code (internal memory of processor), as well as a volatile storage device such as RAM and non-volatile storage device such as a ROM/fixed disc.

Regarding claim 4, Hashem further discloses in one of the location of time slot table stores in a first portion an identifier of a first transmission element (mobile device) that has requested transmission of data in the corresponding time slot and stores in a second portion an identifier of a second transmission element and corresponding time slot (Fig. 10 and 11, paragraphs 0092 and 0093).

Regarding claim 5, Hashem further discloses that data blocks include data packets (RRM/scheduler is packet based, 0096).

Regarding claim 17, Hashem further discloses utilizing digital switches/switch fabric in communication system that utilizes scheduling (paragraph 0045) as associated with transmission of packets (data blocks).

Regarding claim 18, Hashem further discloses that the processor is configured as an integrated circuit (processor can be provided as a single semiconductor integrated circuit, paragraph 0058).

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

3. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hashem et al (US PG PUB 2002/0122403 A1) in view of that which is known in the art.

Regarding claim 3, as indicated above, Hashem discloses management and scheduling in a wireless computer communication system, wherein a processor includes a scheduling circuit for scheduling data blocks from a plurality of transmission elements, wherein the scheduling circuit included a least one time slot table, and a RRM (scheduler) has memory storage capabilities with respect to a general purpose specialized computer via executable programmatic software code (internal memory of processor), as well as a volatile storage device

such as RAM and non-volatile storage device such as a ROM/fixed disc. Hashem is silent on time slot table stored in external memory. However, Examiner takes official notice that it is very well known to one of ordinary skill in the art at the time of the invention to motivated to implement storing data on an external memory device such as a floppy disk or compact disc to the teachings of Hashem for the purpose of having back-up copies of data in case computer equipment is destroyed or unattainable.

4. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hashem et al (US PG PUB 2002/0122403 A1) in view of Bonomi et al (US PAT 6,011,774).

Regarding claim 15, as indicated above, Hashem discloses management and scheduling in a wireless computer communication system, wherein a processor includes a scheduling circuit for scheduling data blocks from a plurality of transmission elements, wherein the scheduling circuit included a least one time slot table. Hashem is silent on a traffic queue having traffic shaping coupled to scheduling circuit supplying time slot request from transmission elements. In a communication system that utilizes scheduling and traffic shaping in a packet-switched network, Bonomi discloses a transmission queue coupled to traffic shaper coupled to a scheduler. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to be motivated to implement a traffic shaper in association with transmission queues in a scheduling process as taught by Bonomi with the teachings of Hashem for the purpose of further managing scheduling of transmission request by multiple transmission devices.

5. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hashem et al (US PG PUB 2002/0122403 A1) in view of Airy et al (US PG PUB 20020159411 A1).

Regarding claim 20, as indicated above, Hashem discloses management and scheduling in a wireless computer communication system, wherein a processor includes a scheduling circuit for scheduling data blocks from a plurality of transmission elements, wherein the scheduling circuit included a least one time slot table, and a RRM (scheduler) has memory storage capabilities with respect to a general purpose specialized computer via executable programmatic software code (internal memory of processor), as well as a volatile storage device such as RAM and non-volatile storage device such as a ROM/fixed disc. Hashem is silent on programs executed to implement steps of scheduling data blocks/packets for transmission from multiple transmission elements. In a wireless communication system wherein scheduling transmission data is implemented, Airy discloses scheduling in a cellular network wherein the architecture includes a base transceiver station communicating with a plurality of subscriber stations, scheduling time slots, whereby a computer readable medium contains program instructions scheduling transmission of data (Abstract). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to be motivated to implement the use of program instructions for scheduling transmission as taught by Airy with the teachings of Hashem for the purpose of further managing resource access in a computer communication environment.

Allowable Subject Matter

6. Claims 6-14 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

7. The following is a statement of reasons for the indication of allowable subject matter:

Although the prior art discloses utilizing scheduling in a communication system, wherein time slots are managed by a time slot table, they fail to teach or suggest with respect to claim 6, scheduling circuit provides dynamic maintenance of time slot table such that the identifiers of requesting transmission elements are entered into the table locations on a demand basis, with respect to claim 7, transmission elements including a structure allowing a given one of the transmission element identifiers to be linked to another of the transmission element identifiers, with respect to claim 8 and 9, in the event of a collision between multiple transmission elements requesting a given one of the time slots an identifier of a first one of the requesting transmission elements is entered into a first portion of the corresponding location in the time slot table, an identifier of a final one of the requesting elements is entered into a second portion of the corresponding location in the time slot table, and an additional one of the requesting elements is linked to at least one of the identifier of the first requesting element and the identifier of the second requesting element, thereby creating a linked list of the multiple requesting elements for the corresponding location in the time slot table, and with respect to claim 10-14, among the set of pointers for the time slot table, an actual pointer is pointing to a location in the time slot table corresponding to actual time.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Prenell P. Jones whose telephone number is 571-272-3180. The examiner can normally be reached on 9:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chi Pham can be reached on 571-272-3179. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Prenell P. Jones

February 1, 2006


CHI PHAM
PERMISSORY PATENT EXAMINER
ELECTRONIC BUSINESS CENTER 2/3/06